



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,446	10/12/2005	Martin Mosquet	IXAS-148	5120
21832 7590 05/28/2009 MCCARTER & ENGLISH, LLP HARTFORD CITYPLACE I 185 ASYLUM STREET HARTFORD, CT 06103				
EXAMINER				
LEE, RIP A				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
05/28/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/516,446

Applicant(s)

MOSQUET ET AL.

Examiner

RIP A. LEE

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☒ Claim(s) 1, 5, 12, 16-19, 21, 22, and 25-28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This office action follows a response filed on March 9, 2009. Claims 1, 2, 6-13, 16-23, and 26-31 were amended. Claims 1-31 are pending.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR.

2. Claims 1-4, 6-12, 17-31 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 10/510,247 in view of Passut *et al.* (DE 197 35 431).

Both sets of claims are drawn to an aqueous emulsion for applying to concrete/mortar containing (a) paraffin wax, (b) hydrocarbon compound, and (c) oil formed of at least one ester. Claims of the copending application are not drawn to (d) and (e) filler. However, at the time the instant invention was made, it was well-established practice in the art of cement treatment, as shown in Passut *et al.*, to use acrylic latex as binder for paraffin waxes (about 10-30 wt %), and to use filler such as silica (1-10 wt %) and magnesium silicate (0.2-4 wt %) to adjust the viscosity

in order to obtain a sprayable coating composition. Therefore, it would have been obvious to one having ordinary skill in the art to include acrylic binder as binder for the hydrophobic emulsion of the copending claims in order to render the composition sprayable, and it would have been obvious to one having ordinary skill in the art to include filler to adjust the viscosity of the composition appropriately. One of ordinary skill in the art also would have found it obvious to make the emulsion of the instant claims by carrying out the process recited for making the emulsion of the copending application and including a step of incorporation of the latex of Passut *et al.*

This is a provisional obviousness-type double patenting rejection.

Claim Objections

3. Claims 1, 5, 9, 17, 18, 22, 26, 27, and 28 are objected to because of the following informalities: Nomenclature for component (c) is inconsistent in the cited claims. As indicated in the previously, the ester-based oil is, technically, not a hydrocarbon since it contains atoms other than carbon and hydrogen. Please select one descriptor and ensure that all claims recite the same term. Appropriate correction is required.

4. Claim 1 is objected to because of the following informalities: In section (a), please delete the period mark in the term “40 °C.” Appropriate correction is required.

5. Claim 9 is objected to because of the following informalities: (i) In line 3, the term “is an oil” is redundant and may be removed from the claim. (ii) In line 4, please replace “chosen” with “selected.” (iii) The subject of claim 10 has been included in the claim; this appears to be a transcription error. Appropriate corrections are required.

6. Claim 12 is objected to because of the following informalities: (i) In line 3, please replace “chosen” with “selected.” (ii) In line 5, delete “and” which appears after “undecanediol.” (iii) In line 6, please replace “chosen” with “selected.” (iii) In line 8, delete “and” which appears after “dodecanetriol.” (iv) In line 8, insert “and” after “-alkenes.” Appropriate corrections are required.

7. Claim 16 is objected to because of the following informalities: Please delete the extraneous dash mark “ - ” that appears before “powders.” Appropriate correction is required.
8. Claim 17 is objected to because of the following informalities: (i) In line 6, the paraffin wax is not used “alone.” See corresponding claim format in claim 1. (ii) In section (a), please delete the period mark in the term “40 °C.” Appropriate corrections are required.
9. Claim 19 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 19 describes an ester prepared from the generic term “an alcohol” which is broader in scope than “mono-, di- or trihydric alcohol” recited in claim 18. As such, claim 19 would appear to fail to limit further the subject of claim 18.
10. Claim 21 is objected to because of the following informalities: The upper limit of the claimed range appears to have been deleted inadvertently. Appropriate correction is required.
11. Claim 25 is objected to because of the following informalities: Please delete the period mark in the term “20 m²/g”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 7-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 7 recites a kinematic viscosity measured at “standard temperatures and pressure conditions.” The relevant section of the specification may be located on page 19, lines 32-34. It is not entirely clear what is meant by this term, and the disclosure does not define precisely what is considered standard temperature and standard pressure. For instance, standard

temperature and pressure is understood as 273 K (0 °C) and 1 atm. Standard temperature for thermodynamic parameters may also be recorded at 25 °C. Kinematic viscosity is typically measured at standard temperatures of 40 °C and 100 °C. The term, "standard temperatures," without qualification is vague and indefinite. Since the viscosity of claimed hydrocarbon oil is quantified, the temperature at which viscosity is measured must be elucidated. Dependent claims 8-10 are subsumed under the rejection.

14. Claims 20, 29, and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what components are described by the claimed ratio because the relative basis is not defined. For instance, the ratio of the total amount of oils and paraffin wax must be defined relative to another component such as the entire composition.

Claim Rejections - 35 USC § 103

15. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

16. Claims 1-15, 17, 18, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crockatt *et al.* (U.S. 4,681,910) in view of Isozaki *et al.* (U.S. 6,538,438); references Gomez (U.S. 4,563,296), Ellis *et al.* (U.S. 4,830,783), Dorman *et al.* (U.S. 4,525,495), and DeLiso *et al.* (U.S. 5,488,021) relied upon for extrinsic evidence only. Reasons set forth in the previous office action dated October 8, 2008 apply to instant claims.

Crockatt *et al.* discloses a coating composition comprising an aqueous dispersion of petroleum wax, polyethylene wax, surfactant, and an aqueous latex of emulsion copolymerized monoethylenically unsaturated monomers. Paraffin waxes contain C₁₈ to C₃₂ hydrocarbons having melting point in the range about 50-70 °C (col. 4, lines 40-54). Those paraffin waxes containing 30-32 carbon atoms in the chain and exhibiting a melting point 50-70 °C meet the requirement set forth for component (a) in the instant claims. Paraffin waxes containing 18 to 29 carbon atoms in the chain meet the requirement set forth for component (b) in the instant claims. While the reference is silent with respect to the relative amounts of each type of wax, a

reasonable basis exists to believe that the paraffin wax of Crockatt *et al.* contains a blend of at least one of the claimed wax components, especially in view of the fact that the wax exhibits a broad range of melting point. Since the PTO can not conduct experiments to investigate the exact constitution of the paraffin wax of Crockatt *et al.*, the burden of proof is shifted to Applicant to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Non-ionic surfactant is utilized as emulsion stabilizer, and it is an ethoxylated castor oil (col. 4, line 39).

The latex is preferably an acrylic copolymer emulsion, however, other polymers are included (col. 4, lines 43-63).

Castor oil is a triglyceride ester having fatty acid chains derived primarily from ricinoleic acid, with oleic acid, and linoleic acid as other significant components; stearic acid is a minor component; the oil may also be in diester and monoester form (see Gomez, col. 3, lines 12-20). The latex is preferably an acrylic copolymer emulsion, however, other polymers are included (col. 4, lines 43-63).

Silica, alone or in admixture with platy clay, is included as pigment (col. 5, lines 39-41). Silica utilized in the invention is purchased as Imsil A-15. This amorphous silica has a mean particle size of 2.9 μ and a distribution of greater than 99% by weight of particles less than 15 μ in size (see Ellis *et al.*, table in column 8). It follows the distribution is between the claimed range of 0-300 μ . The BET surface area is 1.46 m²/g; see Dorman *et al.*, Table 1. Working examples show use of about 10 wt % of platy clay pigment. Inspection of the table in column 6 reveals that the platy is attapulgite clay, which is known to have a BET surface area in the range of 120-150 m²/g (see DeLiso *et al.*, col. 4, lines 43-48).

Compositions of Crockatt *et al.* contain 5-50 wt % of the wax dispersion, 5-95 wt % of polymer emulsion (claim 1). Working examples show that commercially available acrylic emulsion having a solids content of about 46 % and a wax dispersion having a solids content of about 39 % (table 6) are suitable for practicing the invention of the prior art. Total concentration of non-volatile solid materials in the final composition is from about 5 to about 40 percent (col. 7, lines 1-4). The amount of ester based non-ionic surfactant is that sufficient to ensure

formation of a stabilized emulsion (claim 1); this quantity is at least 5 wt %, and preferably at least 20 wt % (claims 4 and 5).

Crockatt *et al.* is silent with respect to the density of the paraffin wax. Isozaki *et al.* discloses a comparable paraffin wax having an average molecular weight of 361 ($361 \div 12 \approx 30$ carbon atoms) and a melting point of 55 °C that has a density of 0.902 g/cm³ (col. 8, lines 16-20). In view of the fact that the C₁₈ to C₃₂ paraffin wax of Crockatt *et al.* is substantially similar to that shown in Isozaki *et al.*, a reasonable basis exists to believe that the paraffin wax exhibits a density within the claimed range set forth in claims 4, 8, and 24. With respect to claim 7, a reasonable basis exists to believe that the lower molecular weight paraffin wax (*i.e.*, C₁₈) of Crockatt *et al.* exhibits a kinematic viscosity within the claimed range, especially in view of the fact that is similar to the claimed hydrocarbon compound ($n < 30$), and particularly in light of the fact that the claimed range is unexceptionally broad. Again, the burden of proof is shifted to Applicant to establish an unobviousness difference as per *In re Best* and *In re Spada*.

17. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crockatt *et al.* (U.S. 4,681,910) in view of Isozaki *et al.*, and further in view of Passut *et al.* (DE 197 35 431).

Crockatt *et al.* discloses use of high molecular weight polyethylene wax having molecular weight greater than 10,000. The reference does not indicate the form of this solid wax. Passut *et al.* discloses that polyethylene wax is commercially available in micronized, that is, finely pulverized, form (page 2, line 64). Thus, it would have been obvious to one having ordinary skill in the art to obtain polyethylene wax in powdery form in view of the disclosure of Passut *et al.* which teaches that polyethylene wax is obtained in such form.

18. Claims 19 and 26 are free of the prior art. The quantities of individual components recited in claim 19 are not disclosed with sufficient specificity in references cited to date.

Response to Arguments

19. Claim objections set forth in the previous office action dated October 8, 2009 have been withdrawn in view of appropriate claim amendments. New objections to matters of form appear in this office action, *supra*. In particular, Applicant is encouraged to use consistent nomenclature to define component (c). Since an ester is not a hydrocarbon, it is suggested that the compound simply be designated an ester.

20. Rejection of claims under 35 U.S.C. 2nd paragraph, set forth in paragraphs 58, 59, 61-63 and 65 in the previous office have been withdrawn in view of claim amendments. Examiner is in agreement with older terminology “vinyl” as synonymous for “ethylene.” The record now shows that this term is understood fully in context of the polymers described in the written disclosure.

21. Rejection of claim 7 under 35 U.S.C. 2nd paragraph, set forth in paragraph 60 of the previous office action has been withdrawn. A new rejection in view of claim amendment has been set forth in this office action, *supra*. The claim is rejected since the term “standard temperatures and standard pressure conditions” has not been defined. It is noted that kinematic viscosity has been reported for commercially available products (page 19, lines 36 to page 20, line 2, examples 1 and 2). Corresponding material data sheets may elucidate temperature and pressure for measuring kinematic viscosity.

22. Rejection of claims 20, 29, and 30 under 35 U.S.C. 2nd paragraph, has been maintained because the relative basis for the claimed ratio has not been defined, *vide supra*.

23. Applicant traverses the rejection of claims under 35 U.S.C. 103(a) as being unpatentable over Crockatt *et al.* (U.S. 4,681,910) in view of Isozaki *et al.* (U.S. 6,538,438). Applicant submits that Crockatt *et al.* represents non-analogous art since the prior art pertains to wood treatment whereas instant claims are drawn to treating cementitious materials. Note however, that claims are drawn to a composition. Additional recitation in the parent claim (claim 1) merely suggest intended use. It is well-established that intended use must result in a structural

difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See MPEP § 2111.02. There is no indication that the composition of the prior art can not be put to use as suggested in the instant claims. As such, the composition still meets the claims.

Isozaki *et al.* is stated not to address the deficiency of Crockatt *et al.*, however the secondary reference is invoked solely to correlate properties of wax. The burden of proof was shifted to Applicant to establish any unobviousness differences with respect to the density of waxes of the Isozaki *et al.* reference in light of evidence provided in Isozaki *et al.* To date, Applicant has not met this burden of proof. Arguments of counsel can not take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997).

Applicant submits that Crockatt *et al.* fails to teach a paraffin wax of formula C_nH_{2n+2}/C_nH_{2n} where $n \geq 30$ and hydrocarbon oil of formula C_nH_{2n+2}/C_nH_{2n} where $n < 30$. Applicant also argues that polyethylene wax would not meet the requisites for the hydrocarbon oil component. Applicant's arguments have been considered fully, but they are not persuasive. Attention is drawn to Crockatt *et al.* which teaches that paraffin waxes contain C_{18} to C_{32} hydrocarbons having melting point in the range about 50-70 °C (col. 4, lines 40-54). Those paraffin waxes containing 30-32 carbon atoms in the chain and exhibiting a melting point 50-70 °C meet the requirement set forth for component (a) in the instant claims. Paraffin waxes containing 18 to 29 carbon atoms in the chain meet the requirement set forth for component (b) in the instant claims. Since the wax contains the range of hydrocarbons, it is deemed that the subject of instant claims is met; note that no quantity of hydrocarbons is established in the parent claim. While the Crockatt *et al.* is silent with respect to the relative amounts of each type of wax, a reasonable basis exists to believe that the paraffin wax of Crockatt *et al.* contains a blend of at least one of the claimed wax components, especially in view of the fact that the wax exhibits a broad range of melting point. Since the PTO can not conduct experiments to investigate the exact constitution of the paraffin wax of Crockatt *et al.*, the burden of proof was shifted to Applicant to establish an unobviousness difference. To date, there has been no display of evidence to elucidate differences between the two inventions.

Regarding the polyethylene wax component in Crockatt *et al.*, the transitional phrase “comprising” in the claims does not exclude unrecited elements.

In light of these considerations, the rejection of claims over Crockatt *et al.* in view of Isozaki *et al.* has been maintained.

24. Applicant traverses the provisional, nonstatutory obviousness-type double patenting rejection of claims as being unpatentable over claims of copending Application No. 10/510,247 in view of Passut *et al.* (DE 197 35 431). Applicant submits that Passut *et al.* describes a composition that is entirely different from that described in claims of instant application. On this basis, Applicant contends there is no reason to pick and choose certain elements in Passut *et al.* and combine those selected elements with the composition of the instant claims. Applicant’s argument has been considered fully, but it is not persuasive.

Claims of the copending application are drawn to substantially the same composition of paraffin wax, hydrocarbon oil, and ester. The missing elements are latex and filler. While the composition of Passut *et al.* is not identical, the relevant fact is that the prior art relates to cement treatment, and where wax is utilized, it is well-established practice to use acrylic latex as the binder for paraffin waxes in order to obtain a sprayable coating composition. Thus, the combination of references would have suggested to the person of ordinary skill in the art that incorporation of acrylic binder to the composition of the copending claims would enable the skilled artisan to apply said composition readily. Therefore, it would have been obvious to one of ordinary skill in the art to include acrylic binder in the composition of the copending claims in order to make a sprayable composition. Passut *et al.* further teaches that filler such as silica and magnesium silicate is routinely added in order to adjust the viscosity of the composition. The person of ordinary skill also would have found it obvious to adjust viscosity with thixotropic filler as taught in the prior art. Applicant has not provided cogent rationale as to why such a combination would not be obvious. In light of these considerations, the rejection has been maintained.

Conclusion

25. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

/Rip A. Lee/
Examiner, Art Unit 1796

May 21, 2009

/David Wu/
Supervisory Patent Examiner, Art Unit 1796

Application/Control Number: 10/516,446
Art Unit: 1796

Page 12